

91-20.

NOV 27 1914

721.9



DAYTON INSERTS COLUMN CLAMPS *and* FORMS



COST REDUCING
DEVICES FOR
CONCRETE
CONSTRUCTION



THE Inserts and devices listed in this catalog play a very prominent part in the construction of modern industrial concrete buildings.

The strength and quality of these devices is fully as important as that of other structural details—as, for instance, the reinforcements used in concrete work.

We realize the necessity of making these Inserts and devices of great strength and uniformity, which need is fulfilled in our high-grade malleable iron. Particular attention is paid to the analysis of the iron mixtures by our chemists in exhaustive laboratory tests and again when the heats are poured.

Inquiries regarding special Inserts or other malleable iron devices are solicited.

We are glad to send responsible contractors samples of any of the devices listed herein, subject to return within thirty days.

The **DAYTON MALLEABLE IRON CO.**
DAYTON, OHIO

10 88-134661 TCF

DAYTON INSERT

Patented

DAYTON INSERTS overcome the difficulty wherever formerly encountered in attaching pipes, machinery shaft hangers, over-head tram rails, or any other parts which must be attached to walls, ceilings or floors in concrete building construction.

These inserts are easy to install since they are simply nailed to the false-work through slotted lugs and when the concrete is poured they become a permanent, integral part of the concrete structure. The Insert is adapted to receive the head of a bolt with enough latitude in adjustment to meet all installation needs.

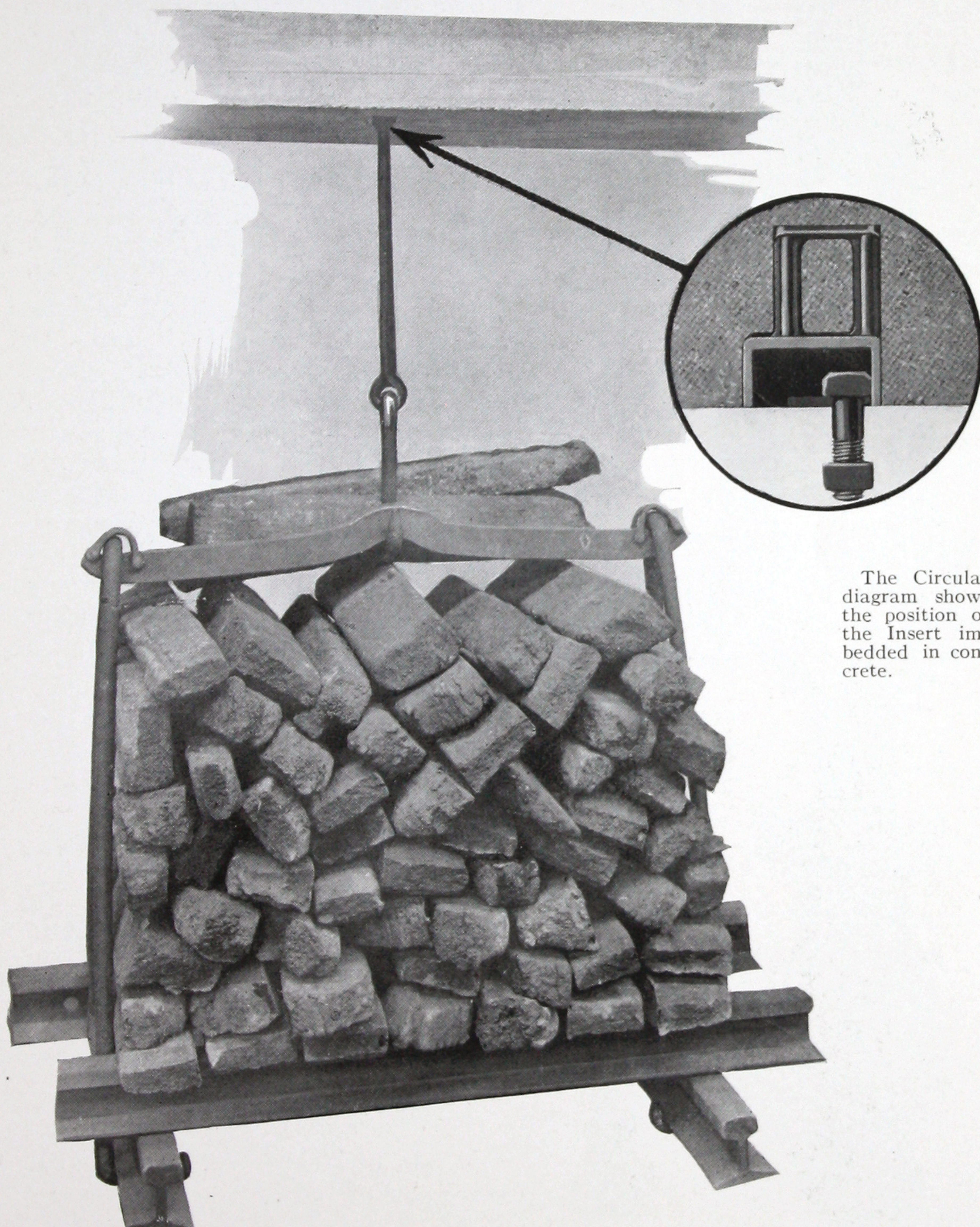
Concrete structures are generally designed for some particular industry which largely influences the extent to which attaching or supporting means are provided. Prudence demands, however, in the erection of such buildings that provision be made for the life of the building and the many and varied uses which future years may bring forth.

A liberal use of the Inserts by placing them on two or three foot centers on the forms provides for future contingencies and in reality is economy. While the first cost of the building may be a trifle more, the later laborious and expensive drilling of the concrete slabs for additional equipment or readjustments is avoided, thus affording a great saving and furthermore providing a more secure attaching means than is possible by placing expansion bolts or lag screws into drilled holes.

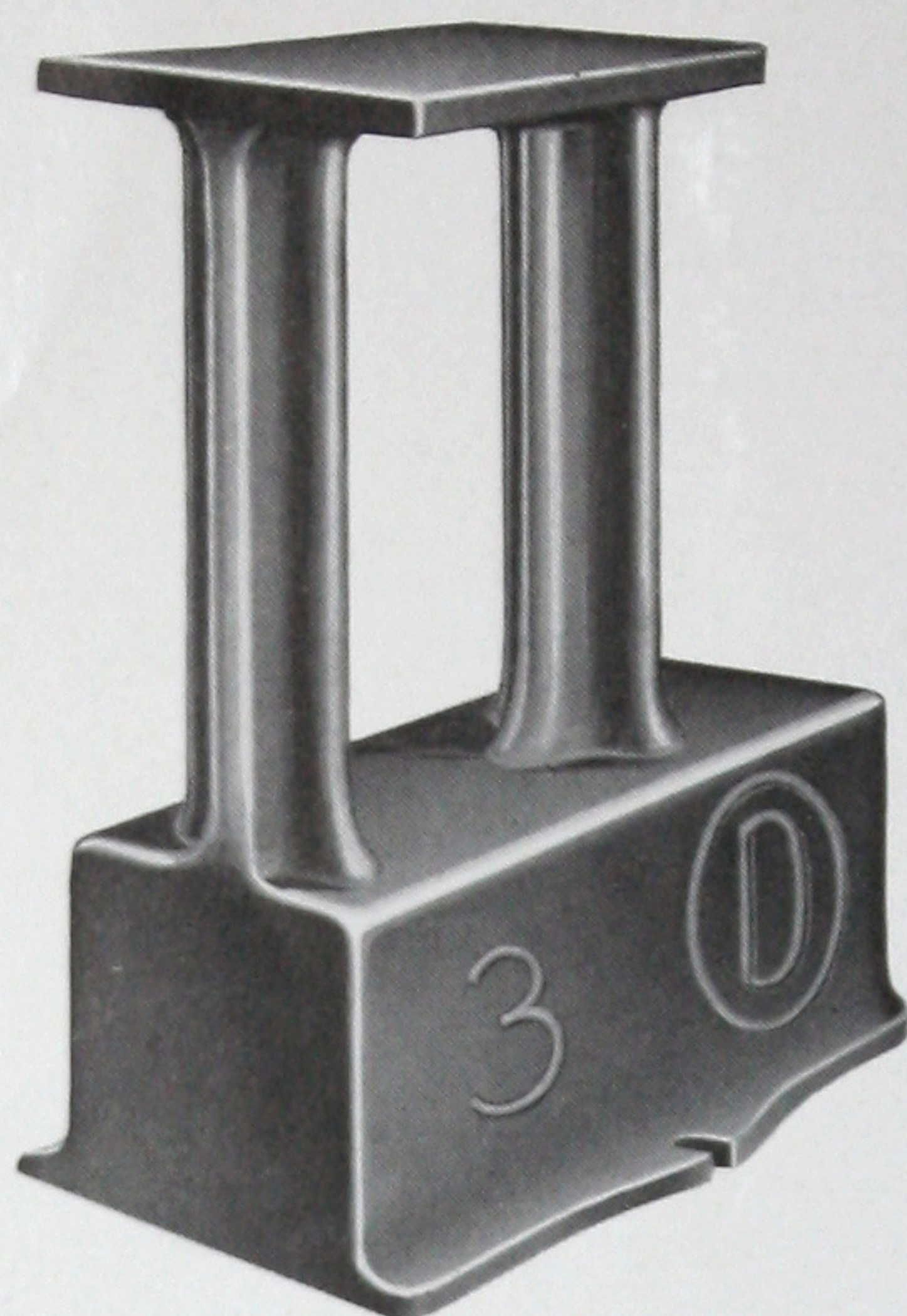
The Inserts therefore become a necessary part of the plans and specifications of every concrete structure and are a permanent investment to the owner.

A Weight of 6400 lbs. of Pig Iron Suspended by one $\frac{3}{4}$ in. Bolt from a Single No. 3 Insert

This load was rocked back and forth on a 12 in. swing without disturbing the insert in the concrete, and is the severest test which we can devise to show the strength of this construction.



The Circular diagram shows the position of the Insert imbedded in concrete.



No. 3. Insert

No. 3 Inserts are furnished in the following sizes:

Bolt	Height Over All	Length of Slot
$\frac{1}{4}$ & $\frac{5}{16}$ "	2"	$1\frac{3}{4}$ "
$\frac{3}{8}$ & $\frac{1}{2}$ "	$3\frac{1}{4}$ "	$2\frac{1}{2}$ "
$\frac{5}{8}$ "	4"	$2\frac{1}{2}$ "
$\frac{3}{4}$ "	$4\frac{1}{4}$ "	$2\frac{1}{2}$ "



No. 10 Insert



No. 10-L Insert

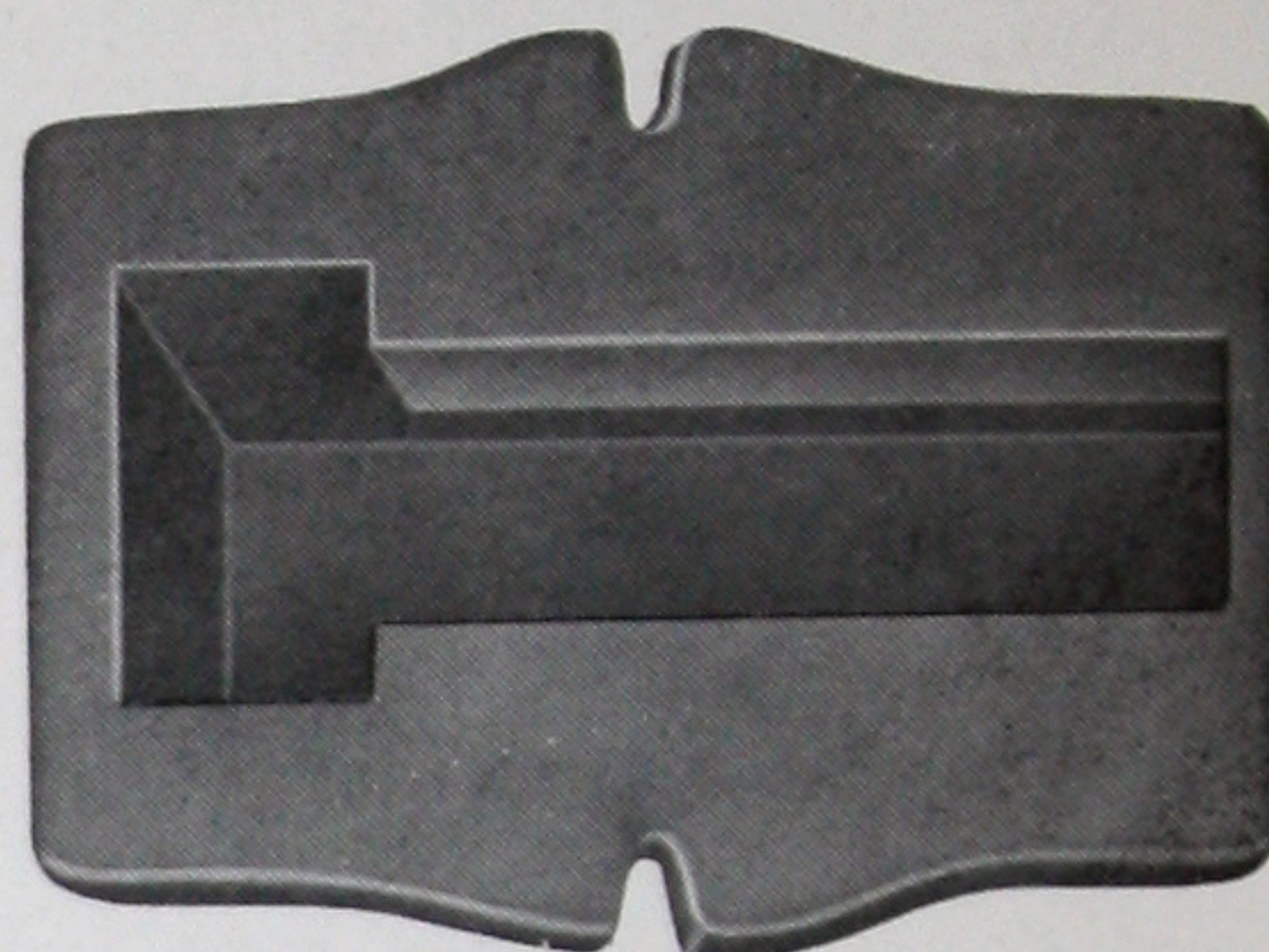


Figure A.

Figure A is a bottom view of the standard No. 3 adjustable Insert. This is the Insert that is generally used for general purposes in factory construction for hanging various heavy weights. The Inserts are of ample strength to take care of the bolt size for which they are designed. A stress in the bolt of 8,000 lbs. per square inch will allow an ample margin of safety in the hanger. These Inserts are usually placed on flat ceiling construction on three-foot centers which makes a very flexible arrangement for supporting any piping or machinery that may be installed.

When ordering No. 3 state size of bolt.

Nos. 10 and 10L Inserts

The No. 10 and 10L Inserts are for use in hanging piping, electric lamps, or any other weights where adjustment is not a desirable factor. These Inserts are threaded with U. S. standard threads for the following size bolts:

$\frac{3}{8}$ ", $\frac{1}{2}$ ", $\frac{5}{8}$ ", $\frac{3}{4}$ ", 1".

When ordering No. 10 and 10L state size of bolt.

No. 5 Insert

**For use where small clearance forbids
the deeper Insert designs**

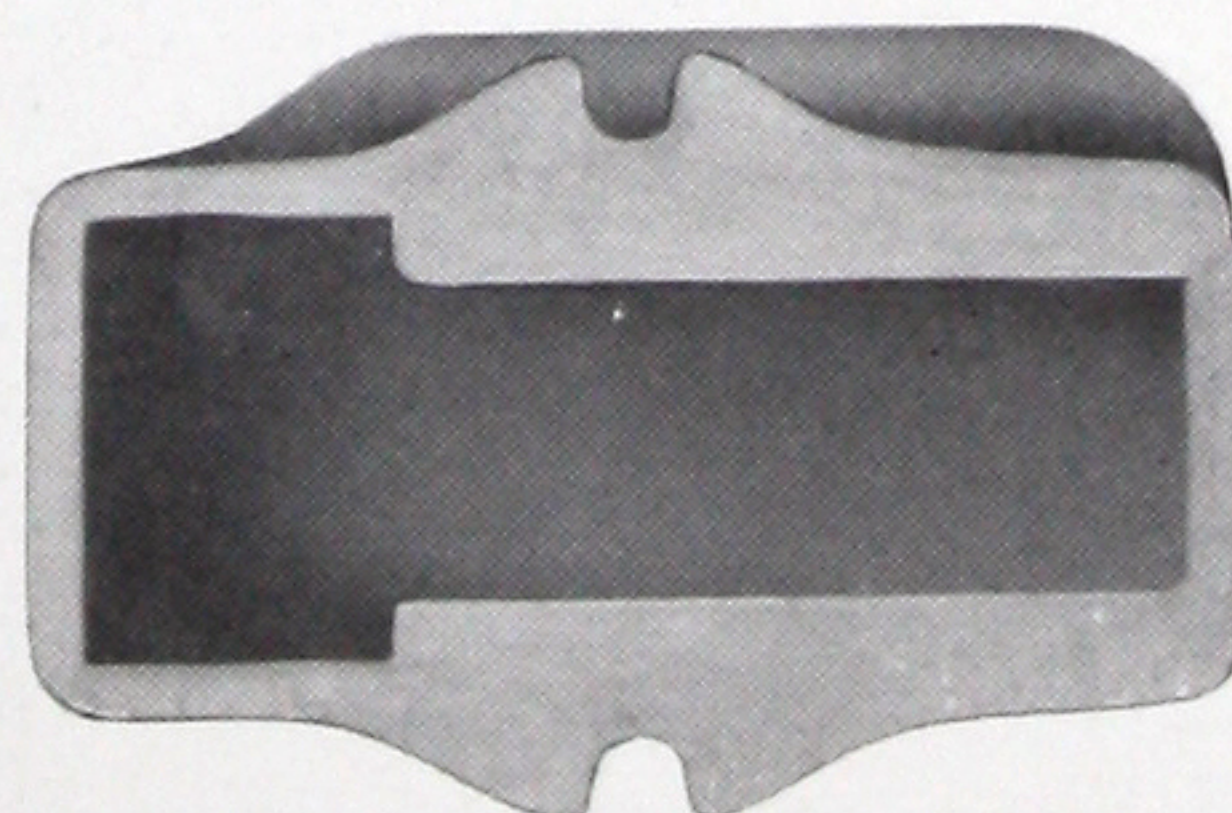
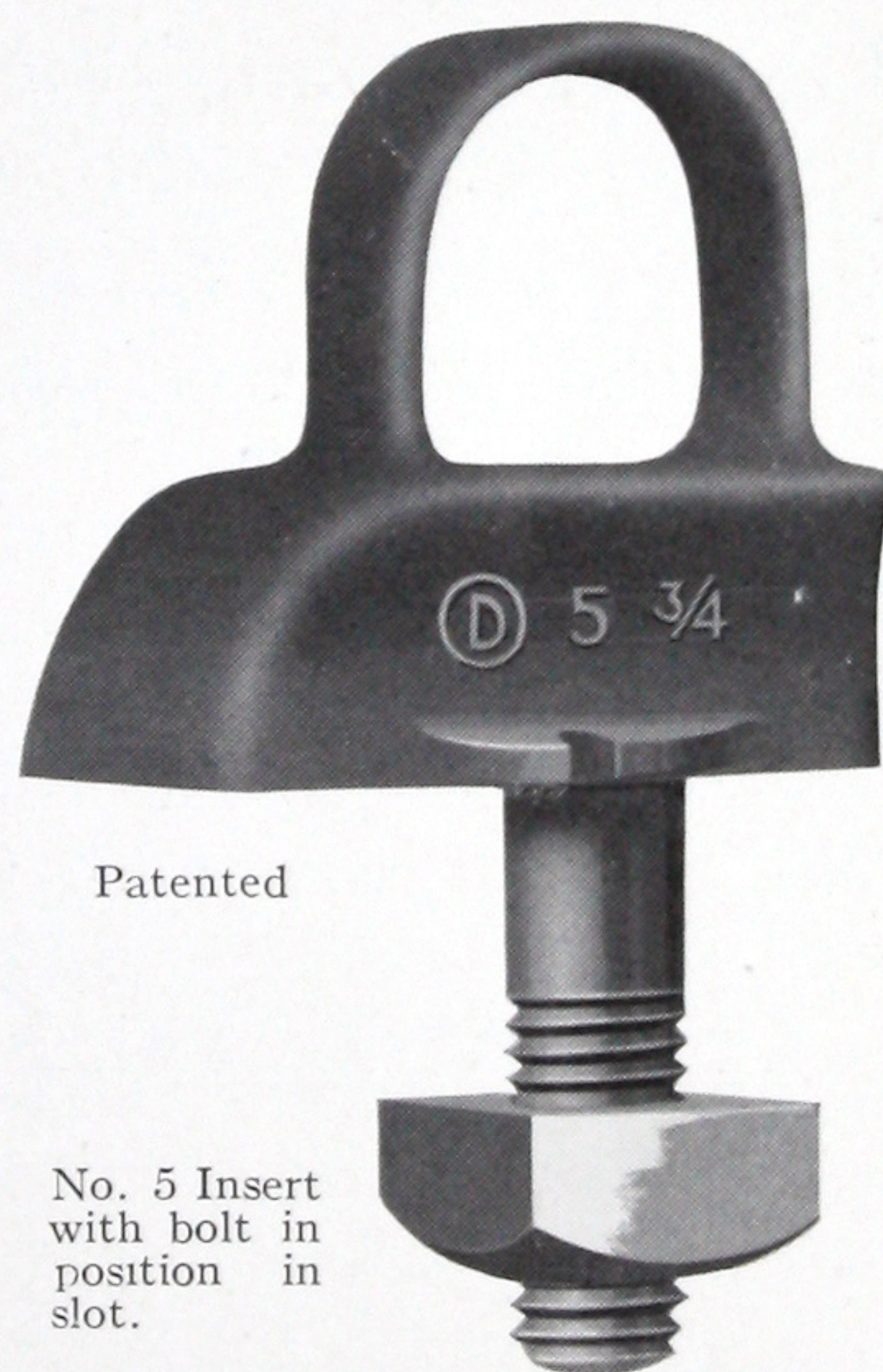
The No. 5 Insert is especially adapted for lighter floor slabs, having a height over all of not exceeding $3\frac{1}{8}$ inches for $\frac{3}{4}$ -inch bolt. They are designed to carry the safe bolt load of the various sizes of bolts for which they are furnished. They are also specially adapted for use where small clearance is allowed between the false work and re-enforcing bars.

The key hole slot shown in the bottom view provides for the insertion of the bolt and its lateral adjustment to secure perfect alignment.

The Inserts are simply nailed in position on the false work before the concrete is poured. By spacing them on two or three-foot centers a very flexible arrangement for supporting all fixtures or for future rearrangement is provided.

	Height over all	Length of slot
No. 5 $\frac{3}{4}$ " bolt	$3\frac{1}{8}$ "	$2\frac{5}{8}$ "
No. 5 $\frac{5}{8}$ " bolt	$2\frac{7}{8}$ "	$2\frac{3}{8}$ "

The No. 5 will also be furnished for smaller size bolts, with dimensions in proportion.



No. 4A and No. 4B Inserts

Dayton Double End Inserts

It frequently is necessary to provide floor anchorage for machinery, motors, etc., directly over shaft hangers and other fixtures which are to be supported from the ceiling. For these requirements, we are prepared to furnish the Dayton Double End Inserts (No. 4A and 4B), which **may be used singly**, the same as the No. 5, or quickly combined into the Double End Inserts as shown.

The corrugations on the columns provide for adjustment for varying thicknesses of floor slabs.

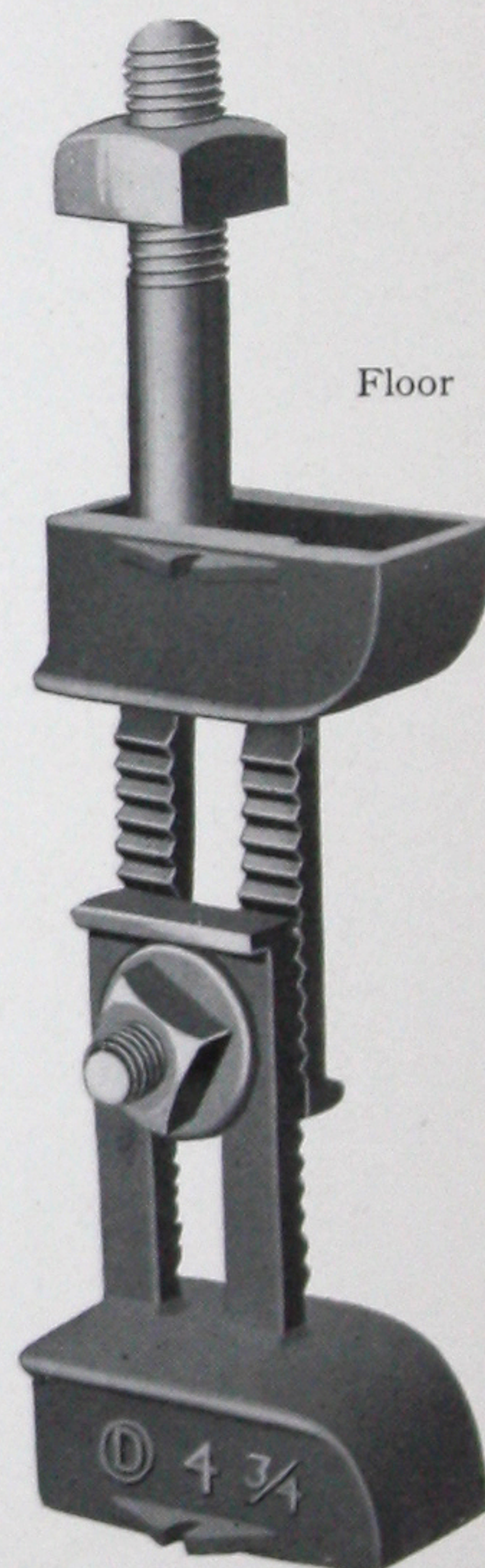
They are entirely interchangeable and when bolted together, forming the Double End Inserts, provide the slotted faces of the insert flush with the floor and ceiling surfaces of the slab.

	Height over all	Length of slot
No. 4A.....	4 $\frac{1}{16}$ "	25 $\frac{5}{8}$ "
No. 4B.....	6 $\frac{3}{16}$ "	25 $\frac{5}{8}$ "

Combinations and adjustment:

	Minimum	Maximum
2 Inserts No. 4A	5 $\frac{3}{8}$ "	6 $\frac{7}{8}$ "
1 Insert No. 4A and 1—4B...	7 $\frac{9}{16}$ "	9"
2 Inserts No. 4B	7 $\frac{9}{16}$ "	11 $\frac{1}{4}$ "

These are designed for $\frac{3}{4}$ " bolts. Other sizes will be furnished as required.



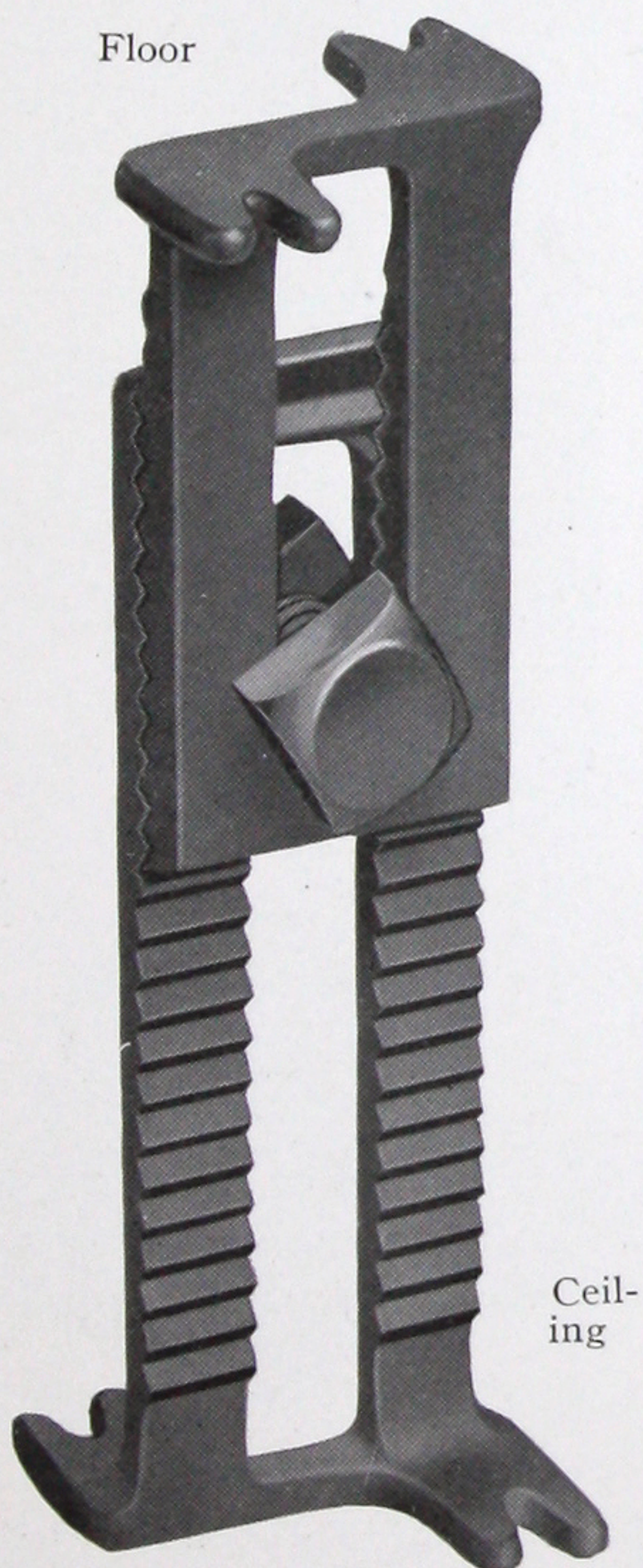
Ceiling
Combination Double
End No. 4 Insert adjust-
able for slab thickness
of from 5 $\frac{3}{8}$ to 11 $\frac{1}{4}$ in.
Patent Pending.

No. 6A and 6B Dayton Sleeper Supports

In many concrete structures, such as machine or pattern shops, office buildings and school houses, etc., wood, cork, or other types of flooring are to be laid over the concrete. Wooden sleepers are required for the support of these floors and must be embedded in the concrete when the slab is poured.

The Dayton Sleeper Support, consisting of two interchangeable parts, Nos. 6A and 6B, provides for supporting the wooden sleepers at the required height above the false work for the thickness of slab to be poured.

These are produced with two corrugated columns, identical with the columns of the Nos. 4A and 4B Inserts, and are thus interchangeable with the inserts and can be quickly combined and adjusted for the desired thickness of slab.



	Minimum height	Maximum height
2 No. 6A combined . . .	$3 \frac{7}{16}''$	$4 \frac{3}{4}''$
1 No. 6A and 1 No. 6— B combined	$5 \frac{9}{16}''$	$6 \frac{7}{8}''$
2 No. 6B combined . . .	$5 \frac{9}{16}''$	$9''$

To the minimum and maximum dimensions given add the thickness of the sleeper, which gives the total thickness of the floor slab.

The Sleeper Supports are quickly nailed to the sleeper and the whole may then be nailed to the false work.

This arrangement of support permits of any floor slab being poured at one time and the sleeper furnishes a guide for leveling the top of the floor slab.

Patent Pending
Combination of two Sleeper
Supports adjustable for slab
thickness of from $3 \frac{7}{16}$ to 9 in.

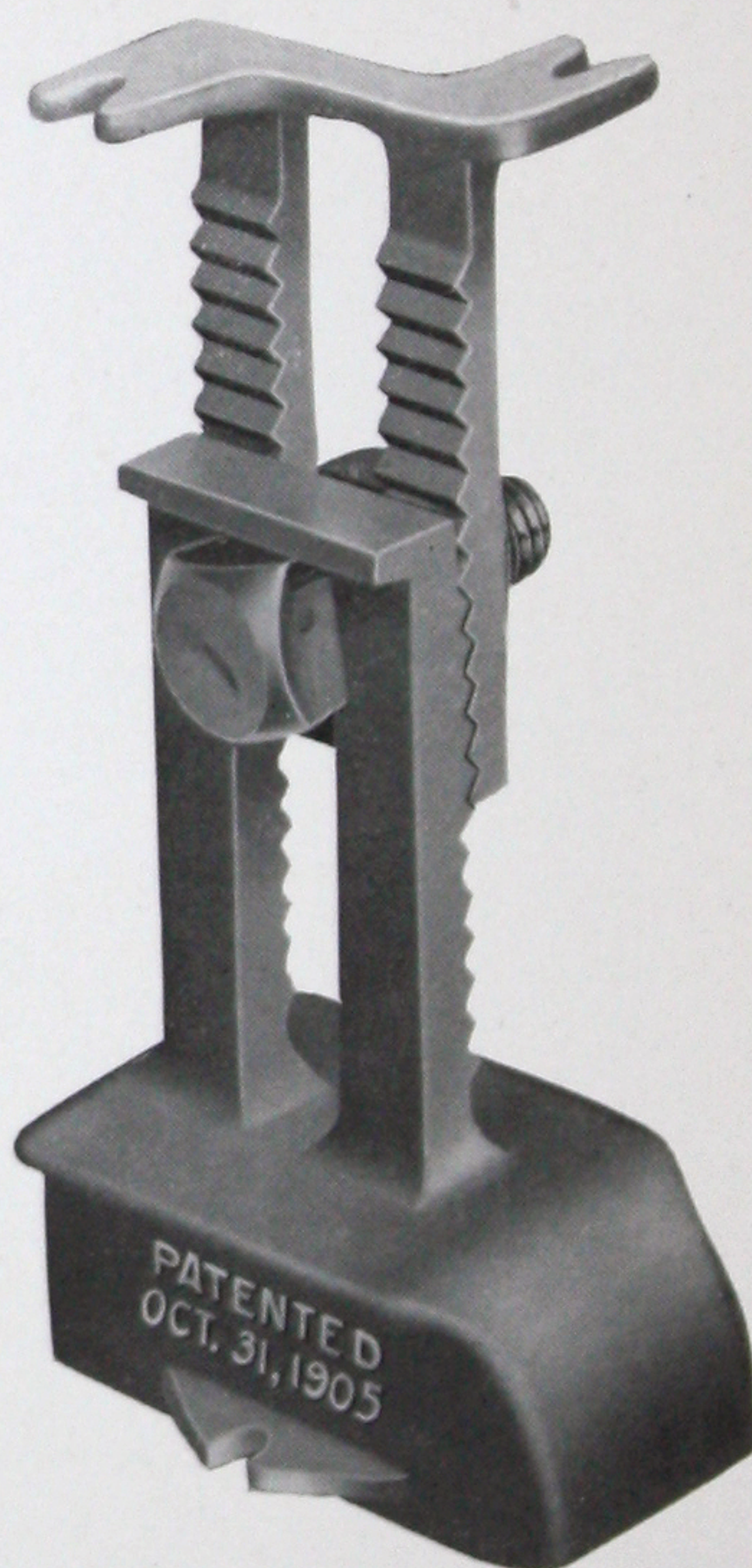
Combinations of Inserts and Sleeper Supports

The sleeper supports Nos. 6A and B, and the Double End Inserts, Nos. 4A and B, may be combined, providing a ceiling Insert and a Sleeper Support, or this combination may be inverted, producing a floor Insert. In either case the combination is adjustable to the thickness of slab required.

Combinations and adjustment:

	Minimum height	Maximum height
1 No. 4A and 1 No. 6A	4½"	5¾"
1 No. 4A and 1 No. 6B	6¾"	8"
1 No. 4B and 1 No. 6A	6⅞"	8⅞"
1 No. 4B and 1 No. 6B	6⅞"	10¼"

When the combination is used as Insert and Sleeper Support, add the thickness of the sleeper to arrive at the slab thickness.



Patent Pending

Combination of No. 4 Insert and Sleeper Support adjustable for slab thickness of from 4½ to 10¼ inches.

No. 20 Insert

For extreme weight suspension and great latitude of adjustment.

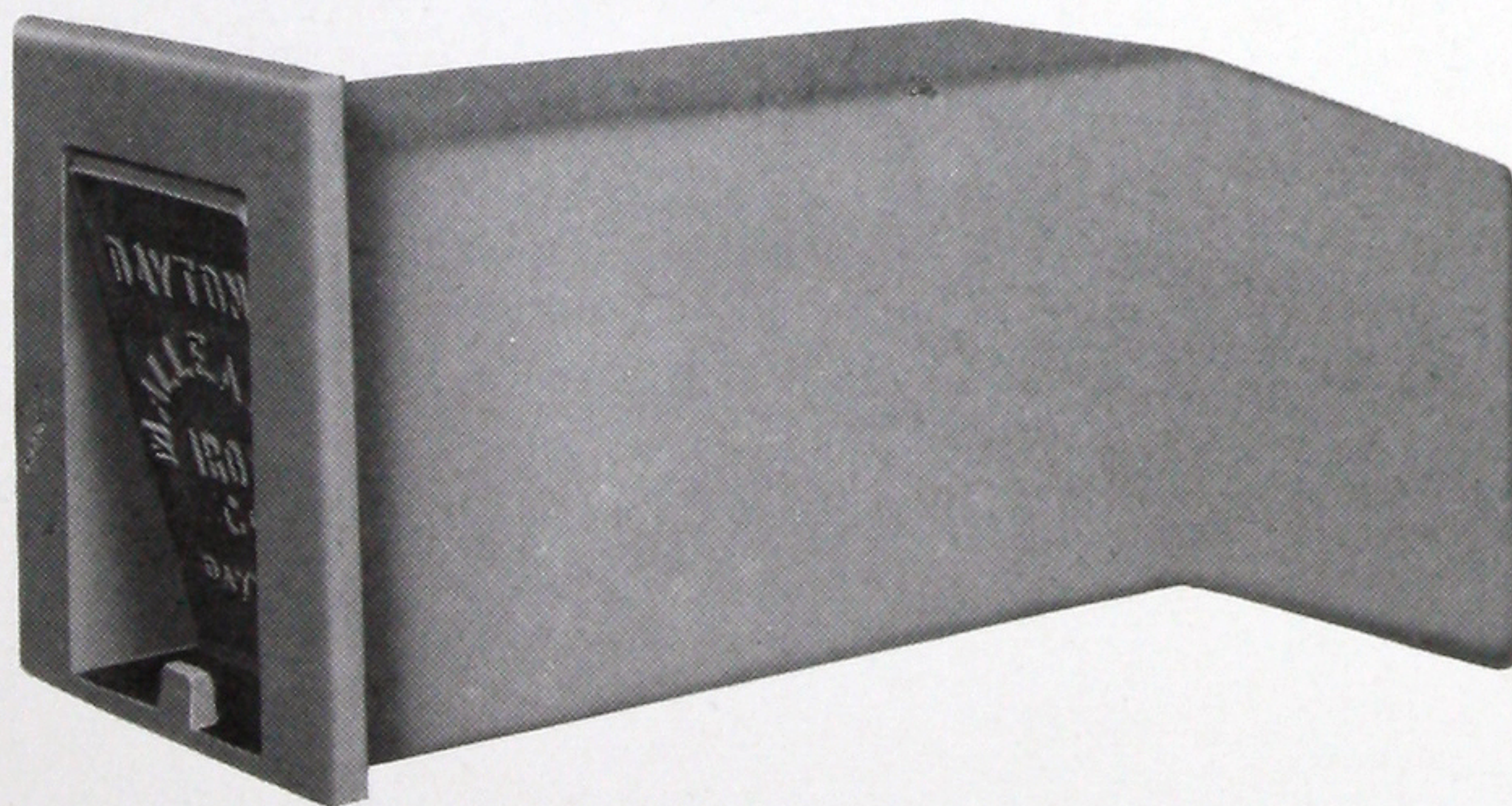
The No. 20 Insert is used for hanging shafting or other heavy weights where one or more bolts are to be used in line, or where a large amount of adjustment is required.



These Inserts are made in 18", 24", and 36" lengths for $\frac{3}{4}$ " bolts. The height over all is $4\frac{1}{4}$ ". These Inserts are capable of sustaining a weight equal to the capacity of several $\frac{3}{4}$ " bolts.

When ordering No. 20 state length.

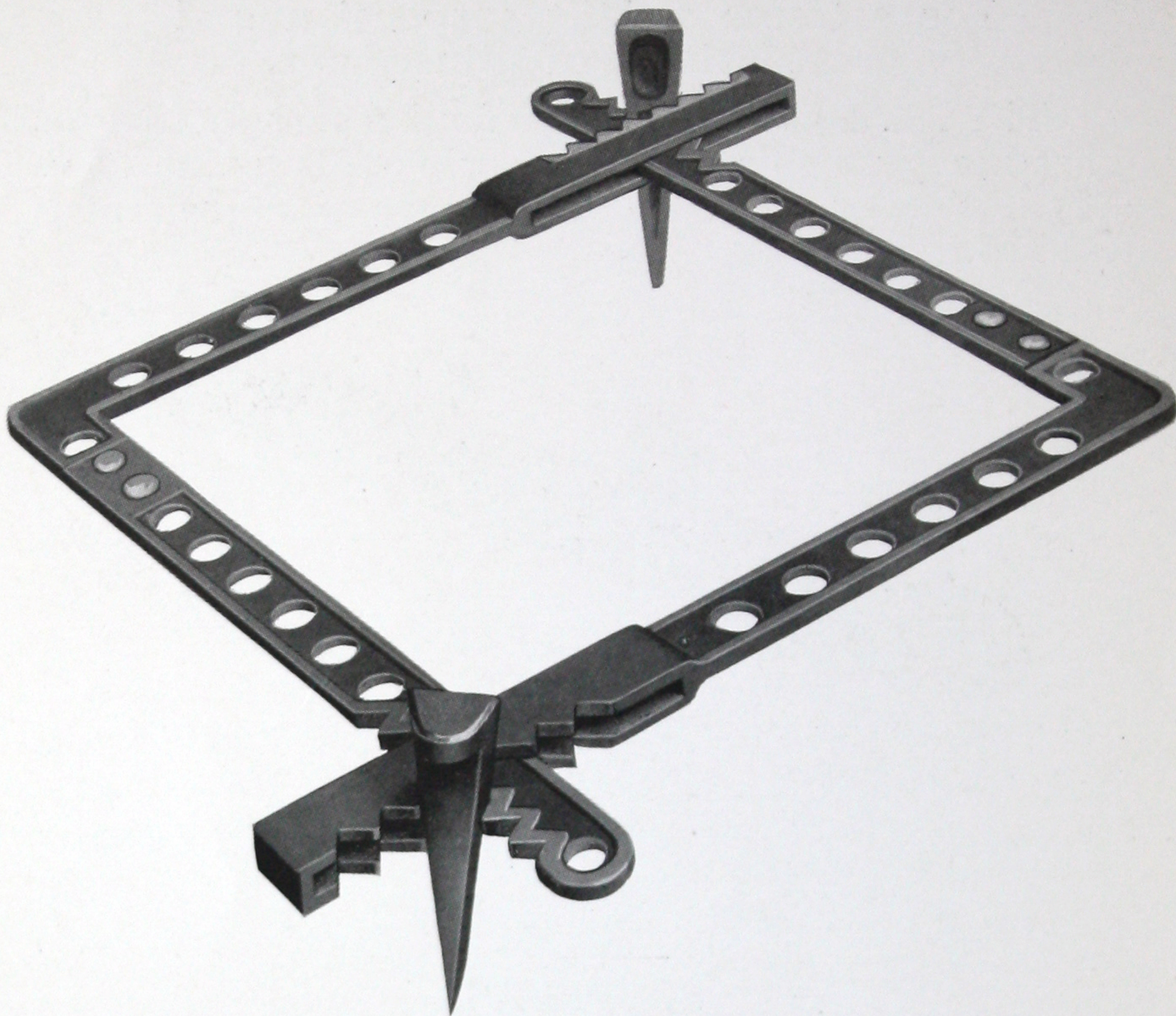
SCUPPERS



Used in sprinkled buildings. Instantly opened by pressure of water, draining the floors.

Also used where flushing the floors is at times necessary. Outer end covered with cast grating.

These scuppers can be furnished for any thickness of wall.

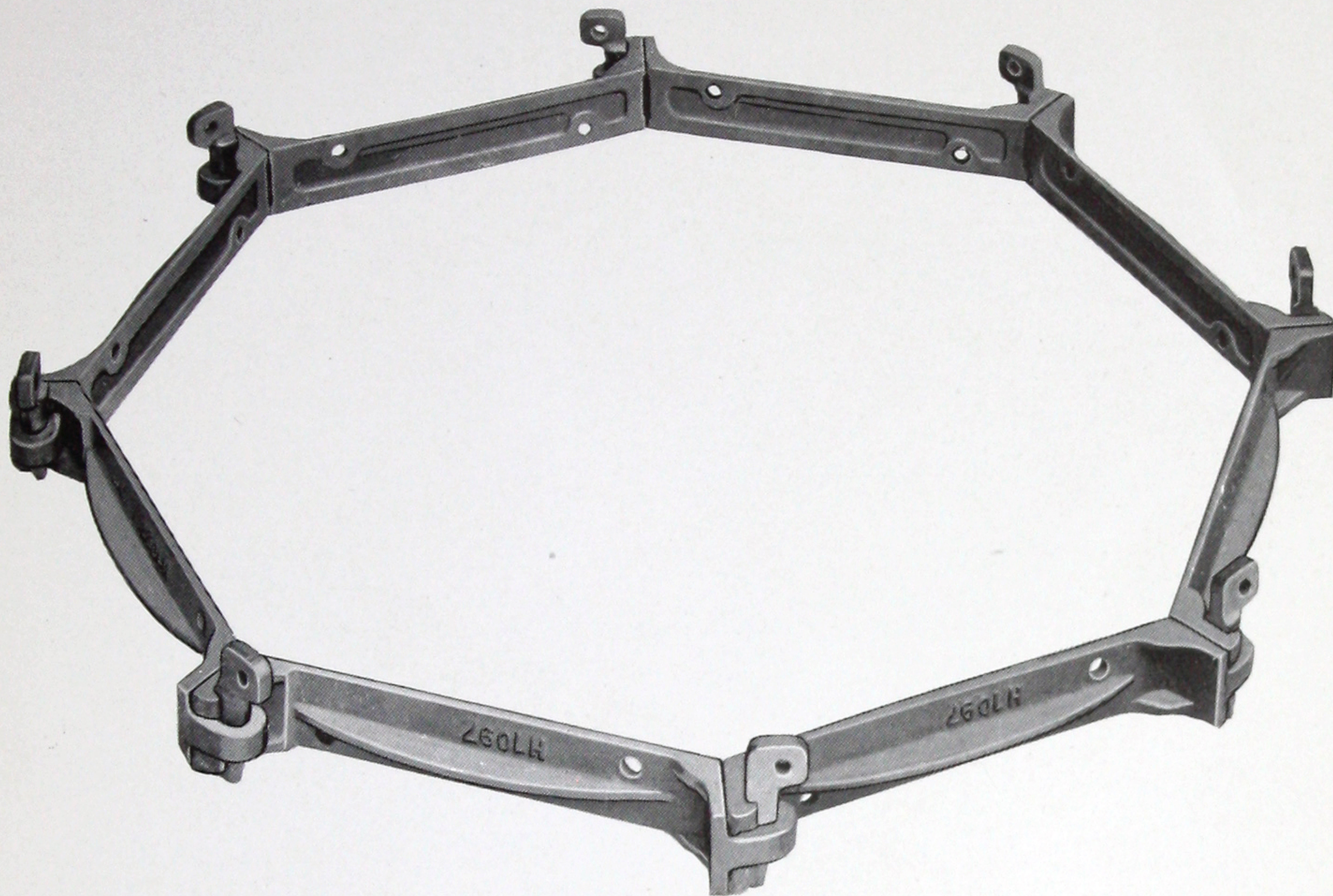


Adjustable Column Clamp

(Patent Pending)

Size Form Outside		Number	
Largest	Smallest		
20 $\frac{1}{2}$ "	14 $\frac{1}{2}$ "	H	1174
31 "	14 $\frac{1}{2}$ "	H	1175
40 "	18 "	H	1176

The Dayton Adjustable Clamp consists of only four pieces of malleable iron. It may be quickly adjusted and drawn tight by a tap of a hammer. The wedges are designed so that any adjustment may be obtained. The rigid corner irons square up the form and hold it securely.



Octagonal Column Clamp

(Not Adjustable)

A quickly applied, wedge fastened clamp. (Illustration on following page shows application of clamp).

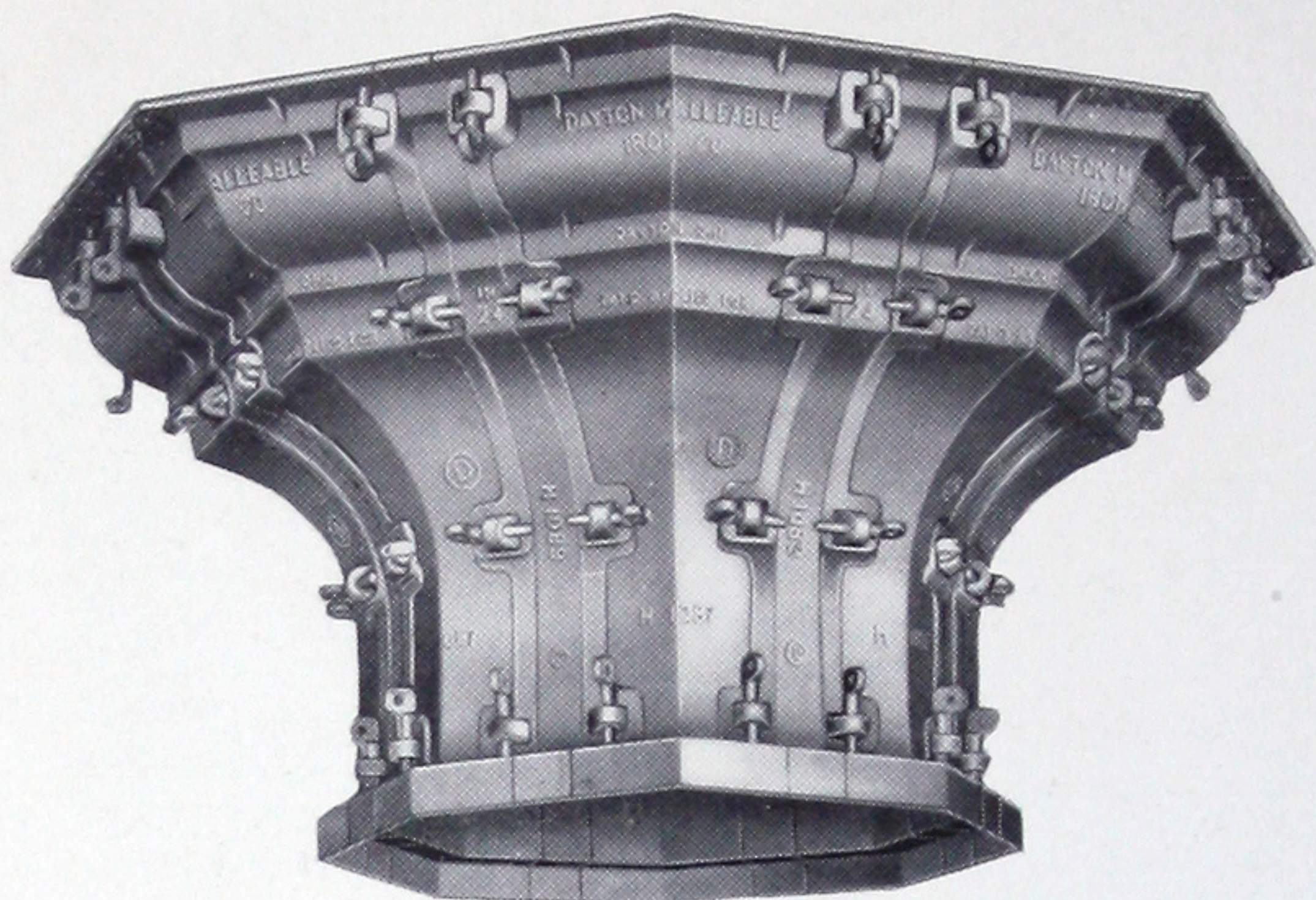
Furnished in following sizes:

Net Size of Concrete Columns	Number
20"	H 1096
24"	H 1097
28"	H 1098
30"	H 1177
Wedge	H 1113

Complete clamp consists of eight clamp castings and eight wedges.

Specify size in ordering,

Dayton Adjustable Capital Form



Made entirely of malleable iron, and is a valuable addition to the equipment of contractors.

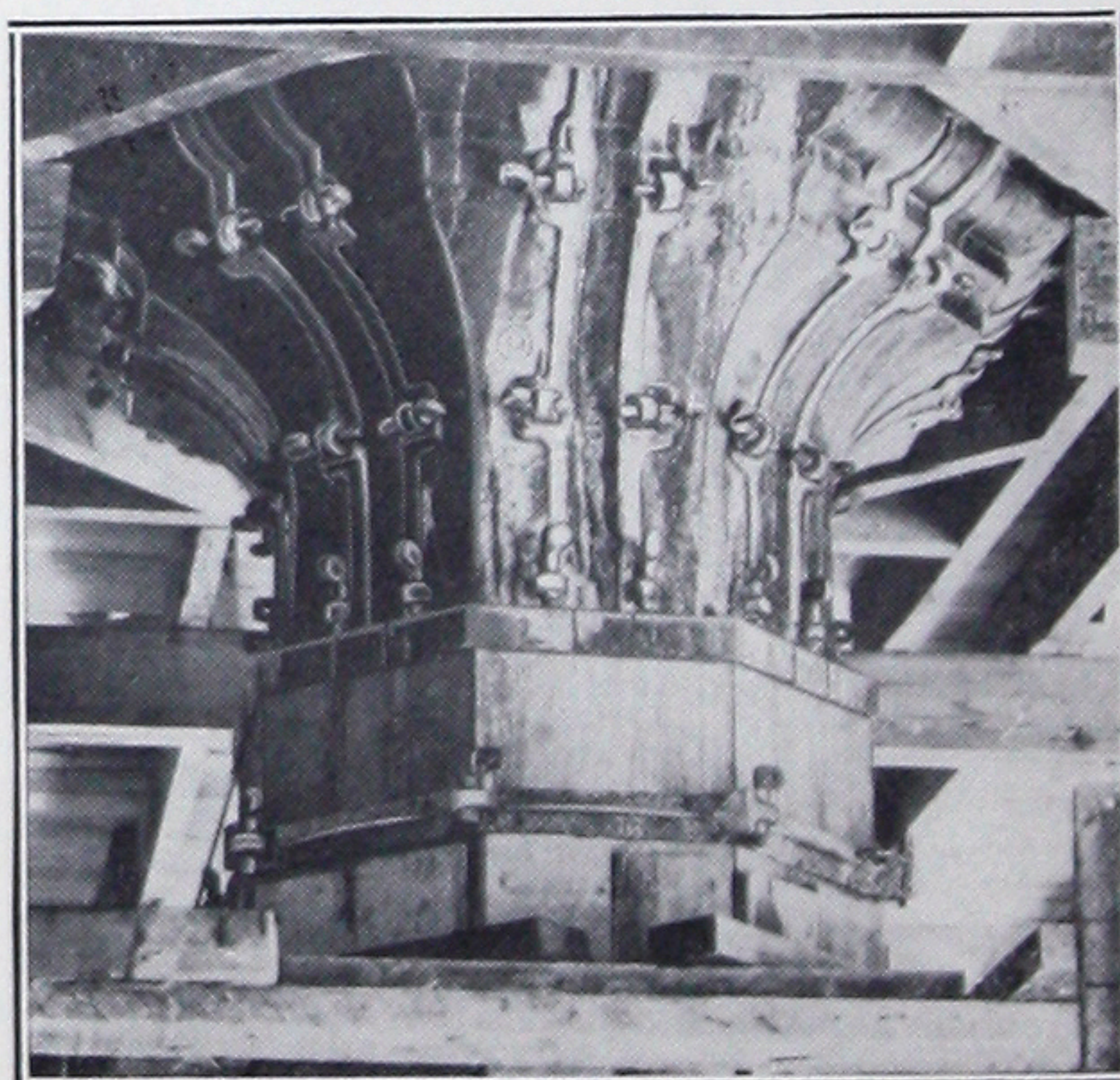
The complete form consists of eight corner castings, eight fillers and the necessary wedges.

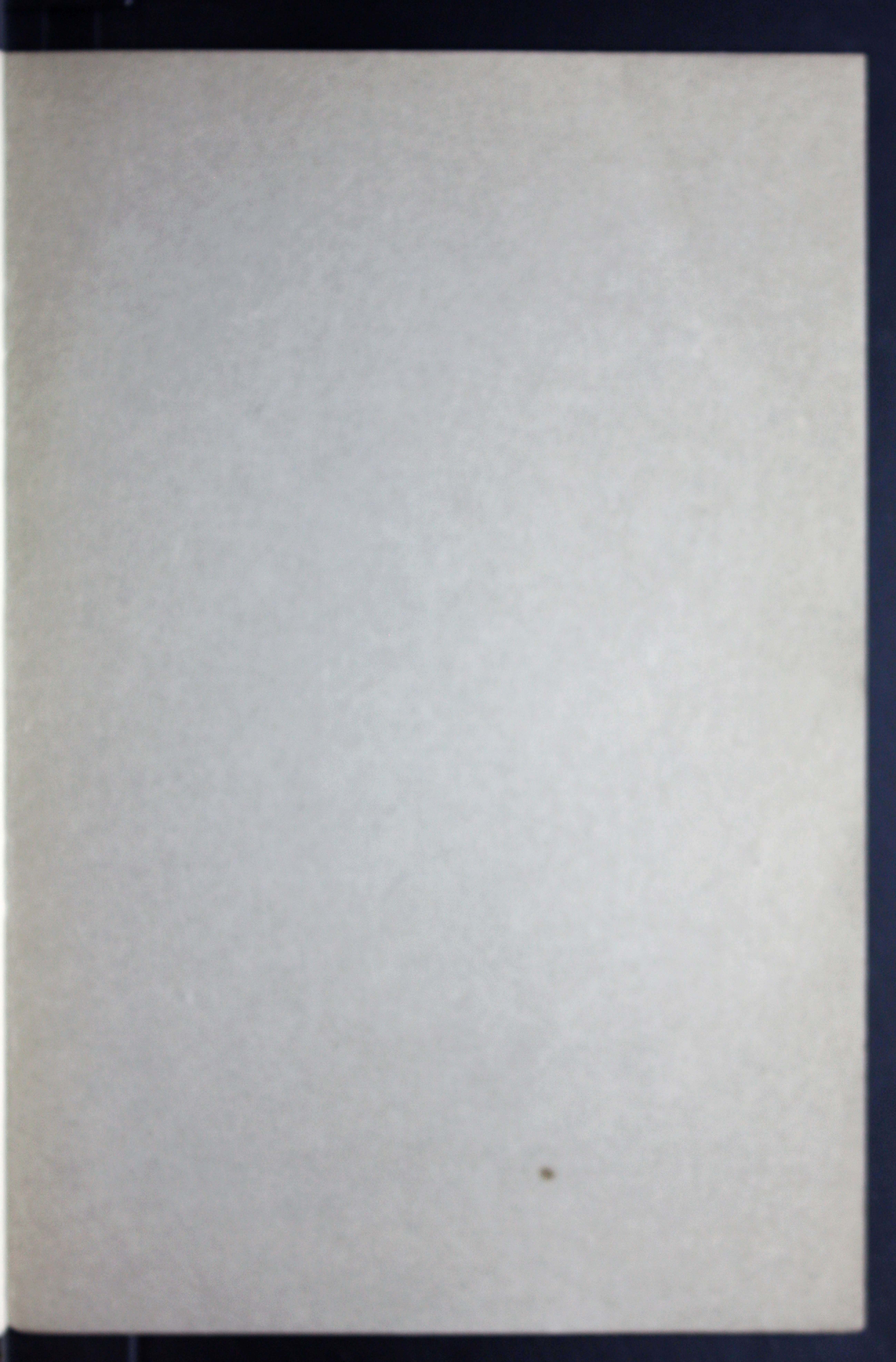
The corners are standard for all sizes, and interchangeable filler castings can be furnished at any time for various sizes of columns.

The change in size is quickly made, and two laborers can handle the form easily.

The smooth inner surface practically eliminates the labor in pointing up after the form is removed.

The use of this form on many buildings shows a saving of at least two dollars per column.





[BLANK PAGE]



CCA